In recognition of the fact that cable operators must receive financial rewards that are sufficient to cover the costs and risks of adding new program services, the Commission has proposed a "going forward" approach that permits an operator to increase regulated rates when it adds a program service by (a) the operator payment to the program service; (b) an amount, based on the number of channels offered by the system, that is intended to recover the incremental network costs the operator incurs when it adds a service; and (c) 7.5 percent of the additional programming costs, an amount that is presumably intended to cover the additional non-network costs and the risks borne by the operator when it adds a service.

In this paper, we propose an alternative to the Commission's approach. In light of the difficulties in determining the incremental costs and quantifying the risks that an operator incurs when it adds a new service, our approach is, instead, to estimate the competitive markup, the markup that would be used by non-competitive systems if they faced effective competition and were not subject to regulation. The estimate of the competitive markup is based on the historical markup of the cable industry on additional services, adjusted downward to account for the impact of effective competition. Because the calculated markup is based on actual operator behavior, it provides a market-based estimate of the costs and risks of adding program services. This estimate can then be employed

to establish rates for cable systems that are subject to regulation when they add program services.[1]

Our approach is to use data on (a) the increase in rates charged by non-competitive systems when they add program services; (b) an estimate of the associated increase in programming costs; and (c) the Commission's estimate of the competitive rate differential to estimate the competitive markup.[2] We have estimated the competitive markup for increases in total channels and increases in satellite services offered under two alternative assumptions about how programming costs are affected by the competition faced by a cable system. We also used two different sources of data on non-premium (hereinafter, "basic") cable rates, the General Accounting Office (GAO) surveys of cable rates and the survey used by the Commission to obtain data to estimate the competitive differential.

As we describe in more detail below, our estimates of the competitive markup substantially exceed the markups that would be produced by the use of the Commission's proposed procedure. The estimated average monthly competitive markup ranges between $.21 and $.34 per subscriber for an additional satellite channel, depending on the assumption made about

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[1] Although we recognize that the same markup may not be appropriate for all program services, we also recognize the large administrative burden to the Commission of regulating different markups for different services. Throughout this paper, therefore, we consider the best single markup to establish for all program services.

[2] In light of our various criticisms of the Commission's approach to estimating the competitive differential, it should be clear that our use of these data does not constitute an endorsement of the Commission's estimate.

programming cost and the data that are used. [3] This compares with figures of approximately $.02 to $.03 for the average service using the Commission's approach.

The competitive markup is the amount by which regulated rates would be permitted to increase over and above any additional programming costs when either a new channel or a new satellite service is added by a system to a regulated tier. These figures are net of estimated programming costs, but include *all* other costs associated with adding a new channel. These amounts are intended, therefore, to replace both the Commission's proposed 7.5 percent markup on programming costs and the additional non-programming costs that were intended to be recovered through the amounts included in the Commission's Network Cost Adjustment table. For satellite services in particular, the estimated markup also varies by system size, generally in the way one would expect: the markups tend to be somewhat smaller for systems that serve larger numbers of subscribers.

We should note that we initially attempted to use the Commission's benchmark equation to estimate directly the markup for the addition of satellite services. This effort proved fruitless, however, because of a previously unnoticed difficulty with the Commission's equation. Specifically, we first used the equation to predict the competitive rate increase when an operator substitutes a satellite service for a non-satellite service, holding constant the number of channels and

[3] Unless otherwise noted, all figures in this paper are in 1994 dollars.

other variables at their non-competitive means. For example, the predicted rate increase for a 12-channel system is $.36 per subscriber per month.

We then used the equation to predict the rate increase when a satellite service is added without eliminating a non-satellite service. One would expect a larger rate increase in this case, since the operator incurs both additional programming and non-programming costs. In fact, the predicted rate increase is smaller ($.27 for a 12-channel system) than that resulting when a satellite service is substituted for a non-satellite service. Because of this anomaly, we abandoned this approach and performed no further exercises with the Commission's regression equation.

The fact that we are recommending an approach that does not rely on the Commission's Network Cost Adjustment table and the underlying benchmark equation is not inconsistent with using the Commission's estimate of the 17 percent rate difference between non-competitive and overbuilt franchises derived from the same equation. The Commission may have confidence in one component of the benchmark equation, the average difference between rates for competitive and non-competitive systems, while having far less confidence in the ability of the equation to explain variations in rates among systems with different characteristics (for example, the number of channels and income levels) within each group.[4] Indeed, the Commission's 7.5 percent solution and its use of the

[4]Our own analysis indicates that the Commission's equation does quite poorly in explaining these variations. See Stanley M. Besen and John R. Woodbury, *An Analysis of the FCC's Cable Television Benchmark Rates* (filed with the FCC, June 17, 1993, *In the Matter of Implementation*

benchmark equation to establish its *transitional* rates for some systems is consistent with the Commission having differing degrees of confidence in the estimated competitive differential and the estimated benchmark rates.

2. VIRTUES OF OUR APPROACH

There are four major virtues to the approach taken here. First, it avoids the bias against services with low charges to cable operators that many commentators have noted about the Commission's current proposal. If the markup that operators can take is stated as a percentage of the charge to the operator, operators may choose to offer services with high charges in preference to other, less expensive, services that viewers regard as more valuable. This bias can be manifested either in the replacement of low-charge with high-charge services, for systems with limited channel capacity, or with the failure to carry services with low charges even if there is sufficient channel capacity to do so, if the markup is insufficient to cover the incremental costs incurred by the operator. Because many costs of adding a program service are independent of the explicit operator payment to the service provider, by establishing the markup on a per-service basis rather than as a percentage of programming costs, these incremental costs can be recovered even for services for which the programming costs incurred by the operator are small.

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of the Cable Television Consumer Protection and Competition Act of 1992: Rate Regulation MM Docket No. 92-266).

Second, because the estimated markup simulates the behavior of competitive systems, the Commission need not be concerned about potential offsets to rate increases that may result, for example, when additional advertising revenues are generated by a new service. Effectively competitive systems also obtain additional revenues, from advertising , promotional advances, and the like, when they add a service, and the markup charged by effectively competitive systems will depend on the magnitude of these offsets. Other things equal, the competitive markup will tend to be lower the larger are these offsets. Our estimate of the competitive markup accounts for these offsets for the typical service.

Third, by estimating a single markup that covers all costs and risks incurred by a cable operator when it carries an additional service, this approach avoids the need to separately identify and measure each element of these costs. In particular, it eliminates the need for the cost studies proposed by the Commission to determine the incremental network costs incurred when a service is added as well to gauge the other costs that the operator incurs.

A final virtue of the proposed approach is that it maintains a relationship between the Commission's benchmark scheme and its "going forward" methodology. Because our estimate of the competitive markup is based in part

on the Commission's estimate of the competitive differential, it can be seen as a natural outgrowth of the earlier regulatory approach.[5]

3. METHODOLOGY

In making our estimates, we began with the inflation-adjusted basic rate for each year in which data were available.[6] We then calculated the change in the basic rate and the change in either the number of channels or the number of satellite channels to obtain the per-channel rate change between years. For one of the methods, we then multiplied the resulting rate increase by .83 to reflect the Commission's estimate of the competitive differential. We then subtracted an estimate of the per-channel programming costs, which is the subscriber-weighted average of the "Top of the Rate Card" estimates by Paul Kagan,[7] to obtain an estimate of the competitive per-channel markup on programming costs.[8] Using this method ("the same-cost method") implies that per-channel programming

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[5] We recognize that the Network Cost Adjustment is based on the Commission's benchmark equation. However, the Commission's has already indicated that it may abandon the Adjustment because it yields such implausible values.

[6] As noted above, two different sources of subscriber rate data were used.

[7] This calculation excludes superstations. The superstation fees reported by Kagan are the satellite carrier fees and do not include copyright royalty payments. Because the copyright payments vary in a complex way with both the revenues of the systems and the number of signals carried, we did not attempt to estimate the equivalent of the "top of the ratecard" fee for these services.

[8] Thus, we did not use average revenue per subscriber per month, as did the Commission in its regression. To do so would have confused revenue changes due to advances in equipment (new remotes, addressable converters) with changes due to increases in program service offerings. Nonetheless, systems that bundle service and equipment will still be included in the calculation, thus creating an upward bias in the markups. On the other hand, some systems that did not bundle may have equipment prices that include a service component, thus creating a downward bias in the markup.

costs do not differ between competitive and non-competitive systems but rates differ by the competitive differential.

The alternative method ("the lower-cost method") is based on the assumption that the competitive markup is 17 percent lower than that for non-competitive systems. This implies that both subscriber rates and programming costs are lower for competitive systems by the competitive differential, which could occur if programmers share in the additional profits that non-competitive cable operators earn. In performing this calculation, we first measured the difference between per-channel inflation-adjusted basic rates and programming costs to obtain the net per-channel markup. This markup was then multiplied by (1 minus the competitive differential), *i.e.*, .83, to obtain an alternative estimate of the competitive per-channel markup. Because this method assumes that programming costs are lower for competitive than for non-competitive systems, it yields a higher estimate of the competitive markup.

Under both methodologies, the markup will be understated for systems that pay less than the top-of-the-ratecard. Systems that are owned by large MSOs typically receive discounts from the top-of-the-ratecard fees. A result of using the largest possible program charges in our calculations is that the markup will be understated.

4. RESULTS

A. GAO Rate Data

Tables 1A and 1B (based on the lower-cost method and the same-cost method, respectively) display our estimates based on data from the GAO reports on cable rates for 1989 and 1991. Using data from the 1991 report, we calculated the average competitive markup for both channels and satellite services added between 1986 and 1991 as about $.21 using the same-cost method and $.26 using the lower-cost method.[9]

Data from the 1989 GAO survey also permitted us to calculate both the average markup and the markup for various system size categories using data for 1986 and 1988. The markups range from about $.40 per additional satellite service for smaller systems to about $.24 for larger systems, with an average of $.29 using the lower-cost method. The satellite service markups range from about $.36 to about $.20, with an average of $.25 using the same-cost method. The advantage of using a markup that depends on system size is that it accounts for scale economies, and probably includes the per-channel economies associated with more channels.[10]

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[9] The calculations use the GAO rates and average number of channels offered for the most popular basic service. In addition, the number of satellite channels was estimated using the recent Commission survey that provided the database for its rate regressions. For those franchises providing data in both 1986 and 1992, the percentage of channels accounted for by satellite services was 44.5 percent in 1986 and 60.0 percent in 1992. We estimated the percentage for intervening years by linear interpolation.

[10] That is, larger systems likely offer subscribers more channels than do smaller systems.

We also report markups using data for channels added and for other pairs of years in Tables 1A and 1B.[11]

B. FCC Survey Data

Tables 2A and 2B (based on the lower-cost method and same-cost method, respectively) report estimated markups using data for non-competitive franchises[12] from the Commission's rate regulation survey. We used these data to estimate the inflation-adjusted change in rates between November 30, 1986 and September 30, 1992. These calculations use the reported basic rate, or the basic rate plus the subscriber-weighted tier rates (for franchises offering more than one tier of basic service). Similarly, we calculated the number of channels and the number of satellite services as subscriber-weighted averages of all channels and satellite services on basic tiers.[13]

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[11] In some cases, the per-satellite channel markup is smaller than the per-channel markup. While one's first inclination would be to presume that the change in total channels can never be less than the change in satellite channels, in fact such an anomaly can occur when satellite services are substituted for non-satellite services. For example, one Ohio franchise in the Commission's survey (Community ID Number OH0755) increased its channels offered by 8 between 1986 and 1992. The number of satellite services offered rose by 13 during the same period. As a consequence of this kind of carriage behavior, the per-satellite channel markup may be understated because substituting one channel for another likely entails lower costs than adding a channel.

[12] We attempted to repeat this exercise for the sample of overbuilt franchises alone. However, so many franchises experienced dramatic declines in rates that the estimated markup was either negative or unreasonably small. For example, the average "markup" for the overbuilt franchises was minus $.21 per additional satellite service. For franchises with parent systems having fewer than 5,000 subscribers, the markup was minus $.55 per additional satellite service.

[13] As a result of the weighting, there can be "fractional" channels offered to subscribers. In three cases (MI0409, WA0419, and WA0294), the resulting markups were so obviously unreasonable that these observations were deleted from the calculations. Because of a fractional decline in the number of total channels and an increase in the basic rate, the markup per additional channels for the first franchise was calculated as minus $95 per subscriber per month. For the second

We then calculated the competitive markup for each non-competitive system using the competitive differential and average programming costs, by means of both the same-cost and lower-cost methods. As in the previous case, we calculated the markup for both channels and satellite services. We then computed the average markup for all non-competitive systems. The average rate markup for each additional satellite service is slightly greater than that found using data from the GAO survey, $.34 versus $.26 (or $.29) using the lower-cost method and $.28 versus $.21 (or $.25) using the same-cost method.[14]

When the results are disaggregated into the GAO subscriber categories, there is a tendency for the estimated markup to fall for larger system categories, but the decline is not monotonic, *i.e.*, it does not fall consistently as the number of subscribers served increases. This reduces the attractiveness of this particular system size disaggregation. We therefore experimented with other subscriber size groupings, also presented in Table Tables 2A and 2B. For each of the three other groupings, the markup for additional channels is unexpectedly *higher* for larger systems. However, for additional satellite services, the markups are as expected, smaller for the larger system size category.

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franchise, the satellite channel markup was minus $79 per subscriber per month. For the third, the satellite channel markup was minus $17 per subscriber per month. In short, we excluded those franchises for which the rate changes (in absolute value) were more than six times the change in the number of total channels.

[14] Recall that the two estimates using the GAO data are for the 1986-1991 period as a whole and for the change in the 1986-1988 period.

5. COMPARISON WITH THE 7.5 PERCENT SOLUTION

By way of a summary, our results suggest the following range of point estimates for the average competitive markup per satellite service:

a. GAO Survey (1986-1991)
Same-cost method .211

b. GAO Survey (1986-1991) .260
Lower-cost method

c. FCC Sample (1986-1992)
Same-cost method .276

d. FCC Sample (1986-1992) .335
Lower-cost method

The above methods all result in estimates of the competitive markup, and thus of the markup to be used when non-competitive systems add services, on the order of $.25.[15] It is of some interest to compare these findings with the markups that are implied by the Commission's proposal to permit systems to increase their rates when they add programming services by 107.5 percent of the additional programming costs plus a small amount -- perhaps 1 to 2 cents per-subscriber per-channel for systems with a large number of channels -- to cover non-programming costs.

Table 3 provides estimates of the markups yielded by the 7.5 percent adjustment for each of 30 major cable services when programming costs are

[15] By way of more concrete examples, one Hawaiian franchise (Community ID No. HI0074) raised its basic rate by an average of $.25 for each satellite service added between 1986 and 1992. A Pennsylvania franchise (Community ID No. PA0200) raised its rates an average of $.27 per added satellite service over the same six year period.

based on the Top of the Rate Card Fee for each service. The largest adjustment is $.036 for ESPN and the smallest is $.002 cents for Faith and Values. The unweighted average is $.014 cents. When these are added to the 1 or 2 cent per-subscriber per-channel increases that are provided for in the Network Cost Adjustment table for large systems, the average markup provided for under the Commission's proposal is on the order of $.024 to $.034, which is approximately one-tenth as large as our estimates of the competitive markup.

6. INCREASES IN THE COSTS OF EXISTING SERVICES

The previous analysis considered the appropriate regulatory treatment for recovering the costs and compensating for the risks of adding new program services to regulated service tiers. It does not address, however, the treatment of programming cost increases that exceed the rate of inflation for services that a cable system is already carrying on one of these tiers.[16]

One way to interpret increases in programming costs that exceed the rate of inflation is that they reflect situations in which: (i) the nature of a program service has changed somewhat which, in turn, is reflected in the large increase in

[16] When all costs, including programming costs, increase by the rate of inflation, the Commission correctly permits operators that charge the full-reduction rate to increase that rate by the increase in inflation. Although the rate charged by the operator, and hence the markup, are unchanged in real, i.e., inflation-adjusted, terms, the dollar amount of the markup *is* increased. Thus, for example, if the cable system had been charging a rate of $22 with costs of $20, for a markup of $2, if inflation raises costs by 5 percent to $21, the rate should increase to $23.10, so that the markup rises to $2.10, i.e., by the rate of inflation.

its programming costs;[17] (ii) because of the change in the service, the cable operator incurs additional costs and risks, although the increase is smaller than when a new service is added; so that (iii) some markup should be permitted on the amount by which programming costs increase faster than the rate of inflation. The approach proposed by the Commission provides the cable operator an inflation-adjusted rate, on the assumption that all costs increase at the rate of inflation, *plus* the amount by which programming costs have increased faster than the rate of inflation, *plus* a 7.5 percent markup on the "excess" programming cost increase as compensation for the additional costs and risks that are incurred because of the change in the nature of the service. We have not attempted to estimate the competitive markup on programming cost increases that exceed the rate of inflation for existing services. However, while for the reasons described above, the Commission's proposed 7.5 percent markup is not sufficient for the addition of new services, it may be appropriate for purposes of cost increases on existing services.

7. THE TREATMENT OF AFFILIATE TRANSACTIONS

The estimated competitive markup should be added to the increase in programming costs to establish the maximum permitted rate increase when a

[17] Other interpretations are possible, including that an increase in the cost of the underlying inputs has risen faster than the rate of inflation because of a rise in the demand for these inputs. Theoretically, one would want to distinguish between those cost increases that are attributable to a change in the offerings of a service and those that are not. However, attempting to make such a distinction would likely impose substantial administrative burdens on operators, programmers, and the Commission.

regulated cable system adds a program service. Determining the operator's programming costs when a service is distributed by an independent party raises no significant issues. However, the Commission has expressed concern that the rate charged by a program service to an affiliated cable operator might be manipulated to evade rate regulation. In particular, the Commission fears that rates charged by affiliated programmers might be raised to permit cable operators to charge prices that exceed those permitted by regulation. If this were to occur, additional profits would be shifted to the program service and, ultimately, to its cable operator owner.

Although it is easy to exaggerate the likelihood of such behavior, especially where both cable system and program service ownership are distributed over a number of other owners, it must be admitted that evasion of regulation in this manner is logically possible. Nonetheless, the Commission's proposal to regulate rates for transactions between cable operators and affiliated program services unless more than 75 percent of the transactions of the program service are with unaffiliated operators is an excessive reaction to its concern. So long as the program service undertakes a substantial amount of transactions with unaffiliated operators, and the prices for these transactions are applied to transactions with affiliates, the incentives for the type of behavior that concerns the Commission will be substantially attenuated. The reason is, of course, that if prices are raised by a program service to evade rate regulation, the service would sacrifice profits on its sales to unaffiliated cable operators because it would have

to charge them the same excessive prices.[18] In our view, far less than 75 percent of the transactions of a program service would have to be with cable operators with which the service is not affiliated for the Commission to be confident that its rate regulations would not be evaded by inflated prices for unaffiliated transactions.

8. CONCLUSION

Our analysis demonstrates that a competitive markup on the order of $.25 per additional service per month can be empirically derived both from the Commission's own data and from the GAO rate surveys. Moreover, the method used to obtain this estimate is fully consistent with Commission's estimate of the 17 percent differential and the use of the its benchmark equation to establish transitional rates.

In contrast to the Commission's 7.5 percent solution, the adoption of the $.25 markup would not artificially discourage cable operators from adding new, but relatively inexpensive, regulated services.[19] Of course, cable operators should be free to charge a lower markup for those additional services that are not as costly to offer. Our market-based approach also has the advantage of accounting directly for offsets in the form of advertising revenues, promotional

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[18] An additional attenuating factor is that many cable program services are only partially owned by cable operators. In such cases, some profits that are shifted "upstream" to the program service will not accrue to cable operators.

[19] Because the estimated markup is in 1994 dollars, it should be adjusted upward over time to reflect the existence of inflation. Thus, if the price level were 20 percent higher than in 1994, the maximum permitted markup would be $.30.

advances and the like, eliminating the need for the Commission to estimate those offsets. In addition, the approach does not require the Commission to engage in a detailed and complex analysis of the difficult-to-measure cost components of the markup.

In an unregulated competitive environment, we would expect cable operators both to add new basic services and to create the cable infrastructure required for the megachannel, interactive system of the near future, one that would offer subscribers a wide range of programming options. Programmers would thus have incentives to engage in innovative programming ventures for the newly rebuilt systems and to continue to provide new basic services consistent with the demand for such services. If the Commission fails to create incentives for system upgrades, operators will not undertake the necessary plant investment and consumers will have only the choice of demanding more traditional regulated services. As a result, programmers will invest more in these traditional services and invest less in the more innovative offerings.

If the Commission delays approval of rate increases for system upgrades, too many traditional regulated services will be provided. In effect, the Commission will be preventing cable operators from providing services that consumers prefer. To avoid unnecessarily discouraging the provision of both new innovative services and traditional regulated services, the Commission should adopt the more liberal programming markup, as proposed here, and, at the same time, act expeditiously to assess and approve rebuild-related rate requests.

Finally, the Commission's proposal to regulate the rates of affiliated program service transactions unless more than 75 percent of the transactions are with unaffiliated operators appears excessive. For most, if not all services, the profits lost to the MSO from the sale of the service at inflated prices to unaffiliated operators would likely be greater than the profits gained from the higher rates that would be charged by the MSO's regulated franchises. Thus, the Commission should choose an unaffiliated-transaction threshold for monitoring affiliated transactions that is substantially lower than its 75 percent proposal.

Table 1A

Per Month Rate Increase Per Subscriber Per Additional Channel Adjusted for the Commission's Competitive Differential

Net of Programming Costs (Lower-Cost Method, 1994 Dollars)

1991 GAO Survey

	Per Channel	Per Satellite Channel
11/86 - 12/88	0.246	0.319
12/88 - 12/89	0.291	0.260
12/89 - 4/91	0.276	0.173
11/86 - 4/91	0.260	0.260

1989 GAO Survey

Cable System Subscriber Size Class	12/86 - 12/87		12/87 - 10/88		12/86 - 10/88	
	Ch	Sat. Ch.	Ch	Sat. Ch.	Ch	Sat. Ch.
1 - 1,000	0.226	0.352	0.362	0.447	0.278	0.394
1,001 - 3,500	0.287	0.449	0.280	0.345	0.284	0.403
3,501 - 10,000	0.256	0.402	0.183	0.242	0.225	0.327
10,001 - 50,000	0.209	0.327	0.210	0.253	0.210	0.295
> 50,000	0.214	0.290	0.195	0.180	0.207	0.243
All Systems	0.230	0.342	0.201	0.232	0.219	0.293

Source: See Appendix A.

Table 1B

Per Month Rate Increase Per Subscriber Per Additional Channel Adjusted for the Commission's Competitive Differential

Net of Programming Costs (Same-Cost Method, 1994 Dollars)

1991 GAO Survey

	Per Channel	Per Satellite Channel
11/86 - 12/88	0.211	0.274
12/88 - 12/89	0.248	0.221
12/89 - 4/91	0.180	0.113
11/86 - 4/91	0.211	0.211

1989 GAO Survey

Cable System Subscriber Size Class	12/86 - 12/87		12/87 - 10/88		12/86 - 10/88	
	Ch	Sat. Ch.	Ch	Sat. Ch.	Ch	Sat. Ch.
1 - 1,000	0.199	0.310	0.327	0.403	0.248	0.351
1,001 - 3,500	0.260	0.407	0.244	0.301	0.254	0.360
3,501 - 10,000	0.230	0.361	0.151	0.199	0.196	0.285
10,001 - 50,000	0.183	0.285	0.173	0.209	0.179	0.252
> 50,000	0.180	0.243	0.141	0.130	0.167	0.196
All Systems	0.201	0.299	0.161	0.186	0.186	0.249

Source: See Appendix A.

Table 2A

Per Month Rate Increase Per Subscriber Per Additional Channel Adjusted for the Commission's Competitive Differential

Net of Programming Costs (Lower-Cost Method, 1994 Dollars)
(FCC Data, Non-Competitive Systems)
1986 - 1992

Cable System Subscriber Size Class	Per Channel	Per Satellite Channel
1 - 1,000	0.489	0.645
1,001 - 3,500	0.049	0.133
3,501 - 10,000	0.360	0.359
10,001 - 50,000	0.388	0.304
> 50,000	0.320	0.225
<= 5,000	0.275	0.353
> 5,000	0.371	0.322
<= 10,000	0.302	0.382
> 10,000	0.366	0.279
<= 25,000	0.316	0.356
> 25,000	0.371	0.281
All Systems	0.331	0.335

Source: FCC Data base.

Table 2B

Per Month Rate Increase Per Subscriber Per Additional Channel Adjusted for the Commission's Competitive Differential

Net of Programming Costs (Same-Cost Method, 1994 Dollars)

(FCC Data, Non-Competitive Systems)

1986 - 1992

Cable System Subscriber Size Class	Per Channel	Per Satellite Channel
1 - 1,000	0.443	0.592
1,001 - 3,500	-0.005	0.060
3,501 - 10,000	0.306	0.305
10,001 - 50,000	0.338	0.251
> 50,000	0.378	0.156
<= 5,000	0.226	0.295
> 5,000	0.346	0.263
<= 10,000	0.251	0.322
> 10,000	0.351	0.221
<= 25,000	0.262	0.300
> 25,000	0.383	0.214
All Systems	0.296	0.276

Source: FCC Data base.

Table 3

1994 NETWORK LICENSE FEES

Program Service	Top Rate Card Fee	7.5% Adjustment
A&E	0.270	0.020
BET	0.100	0.008
Cartoon	0.150	0.011
CMT	0.090	0.007
CNBC (a)	0.170	0.013
CNN (b)	0.385	0.029
Comedy Central	0.140	0.011
Court TV (c)	0.120	0.009
Discovery Channel (d)	0.150	0.011
E! TV	0.090	0.007
ESPN (e)	0.480	0.036
ESPN 2 (f)	0.120	0.009
Faith & Values	0.030	0.002
Family Channel (g)	0.170	0.013
Headline News (h)	0.385	0.029
International Channel	0.060	0.005
Lifetime	0.160	0.012
Mind Extension Univ.	0.060	0.005
MTV (i)	0.320	0.024
Nickelodeon (i)	0.370	0.028
Sci-Fi Channel	0.050	0.004
TCM	0.350	0.026
The Learning Channel (j)	0.095	0.007
TNN	0.300	0.023
TNT (e)	0.430	0.032
Travel Channel	0.050	0.004
TV Food (k)	0.000	0.000
The Weather Channel (l)	0.108	0.008
USA	0.290	0.022
VH-1 (m)	0.100	0.008

Notes: (a) Systems that signed up after the launch of the service pay $.01 higher per year.
(b) Discounts available if system also carries TBS and/or Headline News.
(c) Introduced new rate card 1994.
(d) Rate for systems that signed up after Jan. 87 is $.24.
(e) Rate does not include NFL surcharges.
(f) Rate for systems that signed up after 9/30/93 is $.17.
(g) Rates are based on five-year rate card.
(h) Free if carried with CNN.
(i) Performance discounts available for multiple carriage of MTV services.
(j) Rate for systems signed up by 12/31/93 is $.05.
(k) Free on basic for systems signed up by 1/94. After 1/94, the fee is $.05.
(l) Rates are based on DMA location, not system size.
(m) Rate is for systems that also carry MTV.

Source: Paul Kagan's "Cable TV Programming" April 30, 1994.

APPENDIX

Calculating the Lower-Cost Markup
Using the 1991 GAO Survey

Date	Most Popular Service				
	Monthly Nominal Rate	Monthly 1994 $ Rate	Monthly Rate Net of Programming Costs	Average Number of Channels	Average Number of Satellite Channels
11/30/86	11.71	15.63	13.80	27.1	12.1
12/31/88	14.91	18.19	15.32	32.2	16.0
12/31/89	16.33	19.04	15.81	33.6	17.6
4/1/91	18.84	20.57	16.37	35.3	20.3

Monthly Rate Increase Per Subscriber
Per Additional Channel
[Net of Programming Costs]

Date	Per Channel	Per Satellite Ch.
11/86 - 12/88	0.297	0.384
12/88 - 12/89	0.351	0.314
12/89 - 4/91	0.333	0.208
Entire Period	0.313	0.313

Source: General Accounting Office, 1991 Survey of Cable Television Rates and Services (July 1991), pp. 13,15. For estimates of per-subscriber costs, per-satellite service fees, percentage of total channels occupied by satellite services, and consumer price index, see other tables in this appendix.